Det. H.

LN1312

18 August 1961

25X1A

Dear [redacted] 25X1A

I received the enclosed report from [redacted] in today's pouch and am forwarding it to you for your information. Also attached are some

25X1A memoranda from Lt. Col. [redacted] which I believe are very pertinent.

We are sending a copy of this report less the pictures to [redacted] 25X1A

Very truly yours,

HYCON MFG. COMPANY

25X1A [redacted]

HRE:jdj

Encs.

25X1A

To: Mr. [redacted]

1 August 1961

From: M [redacted] 25X1C

Subject: Report of [redacted] Photographic Labratory Facilities supporting Detachment H.

The purpose of this report is to evaluate the effectiveness of the processing capabilities at this Detachment after eight months of operation.

A. PROCESSING OF 9½" FILM.

25X1A 1. Developement of the original negative is accomplished with (3) EH-6-A continuous processing machines. These three processors are used to develope all project film and all film from the [redacted] 25X1C Standard reconnaissance squadrons. The machines have been modified to transport thin base film as well as standard base film. The thin base film tracks reasonably well, but needs constant watching in the wash and drying stages, as the film has a tendency to track off the rollers.

2. Un-even tension of the film across the rollers is caused by crowned rollers. This, it is believed, caused the mal-tracking and also slight creasing of the film, which remains after the film is dried.

3. Temperature control of the EH-6-A is very difficult to maintain during the summer months, as the cooling units so not have a large enough capacity to maintain 68° F. Developer temperature when the room temperature reaches 90° to 93° F. The processing room is air-conditioned, but with 3 to 5 machines operating continuously, the room temperature surmounts the capability of the air conditioning. All of the drying cabinets of the processors, are vented and piped outside of the processing room. This developer temperature variations make it very difficult to maintain quality control as the developement time must be varied to keep the gamma within the standard H & D curve. If the temperature rises during processing, uneven developement occurs from the head to tail of the roll, which is very dificult to compensate for accurately.

4. Streaking of the negative occurs in the developer even though the EH-6-A has a re-circulating system. It is believed that this is caused by the slow developement time of the thin base film and insufficient agitation of the developer.

B. 70mm FILM PROCESSING:

1. The 70mm program is operating very satisfactory in both equipment and personnel. Reliability is very high and there has been only minor malfunctions of the Dayton units and these have been corrected with only minor assistance from the Special Equipment section. Maintenance of the processor, printer and chemical mixing units has been accomplished regularily and these units are in excellent condition.

2. Developing temperature of 90° F. is very difficult to maintain due to the high temperature of the inlet chilled water. Tap water reaches 86° F. in the summer months and the room temperature reaches 93° F. due to insufficient air conditioning. As the developer temperature rises, the machine speed must be increased up to 12 feet per minute to maintain proper gamma. Spare parts for this equipment in the [redacted] is at the proper level.

25X1A

C. CHEMICAL MIX:

1. Equipment consists of one Dayton mixing unit, one 80 ltr. Dayton mixing tank with pump, four A-1 chemical mixer distributor units, two with inoperative motors (motor replacements on order). The Dayton unit is used exclusively for the 70mm processor.

2. The four A-1 mixing units are used to supply the EH-6-A's and A-9 processors through 50 gallon tanks (two for developer and two for hypo) with pumps and filters for continuous replenishment piped to the processors.

3. Due to this limited mixing, storage and replenishment system, only one type of developer can be supplied to all processors at any given time. Therefore, even though only one EH-6-A is needed for standard base film (which uses D-19 developer) the remaining two EH-6-A's can not be utilized for thin base film (which uses 1-D-80 developer) until processing is completed for the standard base film. Then mixers, tanks and lines must be flushed clean and 1-D-80 mixed and pumped to processors used to develope the thin base film.

4. With an intergrated chemical mixing and replenishment system, all of the processors could be utilized and greatly facilitate the processing of both types of film.
Note: Attached photo's.

D. MAINTENANCE: 25X1C

1. Maintenance performed by the [redacted] has been very satisfactory and shut down time of the equipment has been at a minimum. The critical shortage of spare parts which was in effect during the first month here has been eliminated by parts supplied by the project. Maintenance records are kept on all equipment and periodic inspections and lubrications are conscientiously supported.

E. STORAGE FACILITIES: 25X1C

1. All photographic sensitized material for the entire [redacted] and this project are stored at this facility in an air conditioned and humidity controlled area. Average summer temperature 78° F. Relative humidity 55%.

2. Negative storage for this project is very limited, especially as one full B mission will utilize approximately eighty 300 foot spool storage spaces. The present C.A.F. negative storage file has a limited number of storage spaces remaining.

3. Material storage room is inadequate in space and temperature control for our use. We have on order from project, two 5 ton air conditioners, one of which is to be used for an additional storage area for project material and negative storage use only. This will keep all project material seperate from the normal [redacted] supplies. The [redacted] will start construction of this building when the air conditioner has been shipped. These air conditioners have been on order for approximately four months. The one unit for the storage room can be either 220 volt single phase or 220 volt three phase.

25X1C

25X1C

F. PERSONNEL: 25X1A

25X1C

1. The [redacted] doing the processing are very conscientious and in the past six month their technical proficiency has improved remarkably. The original training given by [redacted] and his personnel, has proved to be very effective and with continued training and experience, the [redacted] processing capability should be fully operational in the near future. Keeping in mind that the processing procedures followed prior to our association with them was a much different concept.

25X1C

2. At present, two complete crews are trained for both 70mm and 9½" processing and operate 12 hour shifts for 24 hour coverage if needed. 25X1C

3. Number of photo technicians [redacted] assigned to support project.

Type of Technician	Qualified	Training	Total
1. "B" Processing & Duplicating	8	4	12
2. "T" Processing & Duplicating	5	0	5
3. Quality Control	4	1	5
4. Blow-up	4	0	4
5. Printing	12	0	12
6. "B" Photo Interpretation	10	2	12
7. "T" Photo Interpretation	6	0	6
8. Maintenance	4	2	6
Totals	53	9	62

G. EMERGENCY POWER SUPPLY:

1. At present the Lab has only one 60 KVA power generator to supply the entire Lab facilities. When the base power fails (which occurs regularily) only enough emergency power is available to supply lighting, processors, printers and chemical mixers. But this unit is not capable of supplying power enough for the air conditioning for the Lab or the storage rooms. As the power has been shut off for as long as three days, this could seriously hamper operations and film storage.

RECOMMENDATIONS

A. FILM PROCESSING, 9½" AND 70mm:

1. Substituting flat rollers for the crown rollers now in the EH-6-A machine to eliminate film creasing and improve tracking. Needed are 3 complete sets of flat rollers plus adequate spares.

2. The addition of a water chilling unit to lower chilling water temperature of the 70mm processing machine and the wash water of the EH-6-A processor. This unit should be capable of delivering 20 gallons per minute of 68° F. water (70mm, 4 gallons per minute. Three EH-6-A's, 5 gallons per minute each) 220 volts, 3 phase.

3. Investigating the possibilities of a nitrogen adgitation system for the EH-6-A's to elimenate developer streaking.

4. Additional air conditioning be installed in the processing rooms.

B. CHEMICAL MIXING:

1. The capability of the chemical mixing room is completely inadequate, particularly if sustained operation of processing both standard base film and thin base film is needed. It is recommended that the chemical mixing room be completely re-organized. The present room be enlarged and sufficient Dayton 100 Ltr. tanks and mix units be installed with pumps, filters, flow meters and valves so that these tanks can be switched to each machine. This will give complete flexability to the system and maximum utilization of all processing machines. It is believed that the [redacted] will furnish additional building space and all labor for this installation. Ventalation fans should be installed for use when mixing chemicals to exhaust the chemical dust and various vapors. Floor drains be installed so that excess water from clean up and spilled chemicals can be drained. 25X1C

C. MAINTENANCE:

1. No recommendations on this section now that spare parts are available and the present maintenance personnel are retained.

D. FILM AND NEGATIVE STORAGE:

1. The five ton air conditioner be expected so that construction can be started on the new storage facility. This will give the project adequate storage for all our needs for the near future.

E. PERSONNEL:

1. Levels of technicians assigned to special projects in the Photo Lab appears to be adequate for the present operation, but it is suggested that the over all quality of these technicians be up graded so that all crews will be of equal professional capability. At the present time it is felt one crew has most of the most capable men. This could cause serious trouble, during sustained operations, to the accomplishment of the mission.

2. Training must be intensified at this time, because as so often happens, after the first bulk of the basic training has been accomplished there is a tendency to let down and a slacking off of professional discipline. Strict adherence to all operating standards must be insisted on so that eventually they will become normal procedures.

F. EMERGENCY POWER: 25X1C

1. That the Air Force, through the MAAG channels, furnish [redacted] Photo Lab with a 150 KVA Diesel generator set to replace the present 60 KVA generator.

SUMMATION 25X1C

The interest, cooperation and dedication of all [redacted] personnel associated with this project since it's inception, has been most gratifying to all members of this section. 25X1C

While very high standards of quality have been established, the [redacted] personnel have exerted themselves to meet these standards.

While many difficulties have been encountered a great deal of progress has been accomplished in only eight months. The routine operations have all been established and there remains only the exceedingly hard task of High quality and 100% reliability. These will be the most difficult to attain.

With the equipment and plant facilities presently available, minimum capabilities can be atained within the next month. While these facilities are rather difficult and inefficient, in some respects, they are quite feasible and should present no serious problems.

It is believed however that with the addition of some equipment (ie: chemical mixing and negative titling) this processing Lab could be uplifted to a tactical capability as soon as the equipment can be installed.

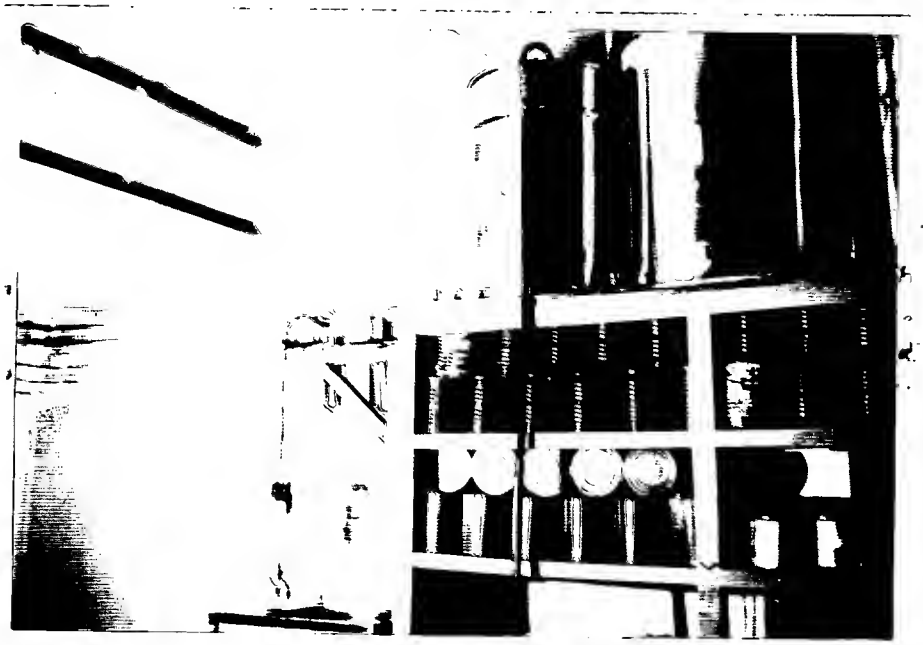
25X1A

[redacted]

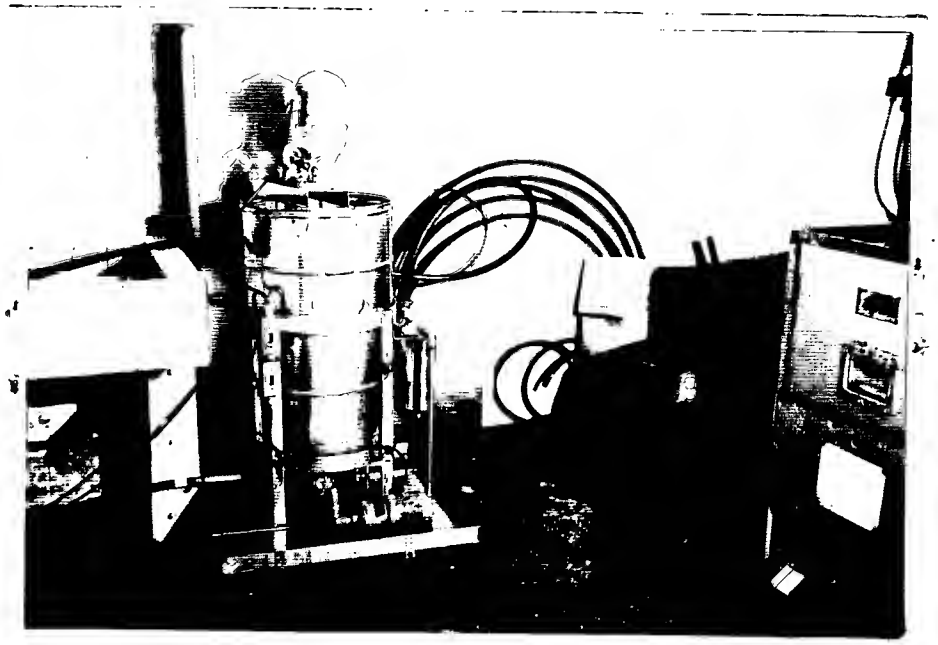
Supervisor
Special Equipment Section

PRESENT LAYOUT OF CHEMICAL MIXING ROOM

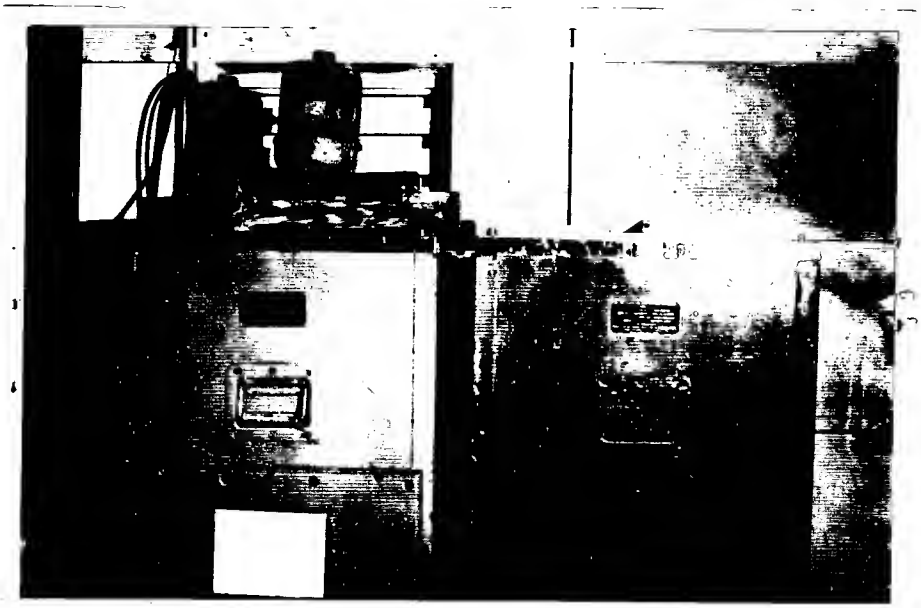
Approved For Release 2000/09/07 : CIA-RDP67B00511R000100030008-0



Approved For Release 2000/09/07 : CIA-RDP67B00511R000100030008-0



Approved For Release 2000/09/07 : CIA-RDP67B00511R000100030008-0



Approved For Release 2000/09/07 : CIA-RDP67B00511R000100030008-0

[redacted]

~~TOP~~ SECRET
SPECIAL HANDLING REQUIRED

The present deficiencies of Photo Tech Sqdn, [redacted]

1. No special "B" film processing machine.
2. No special titling kit for "B" film.
3. High water temperature in summer season.
4. Shortage of chemical mixing unit.
5. More air-conditioned negative storage space is required.
6. More air-conditioned and humidity-controlled supply warehouse is needed.
7. More instrument, technical assistence and training for the Quality Control Section is expected.
8. High temperature in film processing room when operating.
9. No adequate emergency power plant.
10. Shortage of print dryer, if high amount of print is required.

~~TOP~~ SECRET
SPECIAL HANDLING REQUIRED

Special Handling Required

Water temperature record (In F)

Date	Time	No.1 Darkroom	B-5 room	Wash room
July 14	1000	79	86	83
15	1000	82	83	83
17	1530	83	86	83
18	0900	83	86	83
	1100	83	86	83
19	1000	82	83.5	82.5
20	1000	82	81.5	82
21	0900	82	83	82.8
22	0900	82	82.5	82.8
24	1530	83	89.5	84.5
25	1000	82.2	83	83
27	1600	83	88	83.5
28	1000	82.5	83	83
29	1000	82.3	83	84
30	1600	83	85	82.5
31	1100	82	84	82.3
Average		82.2	84.7	83.1

MEMORANDUM

25X1C

FROM [redacted]

DATE: July 4, 1961

TO: Mr. [redacted] 25X1A

This squadron was suggested that a record of the water tempereture used in the Dayton and EH-6A processors shall be sent to the Company. The following record was listed from June 24 thru July 1.

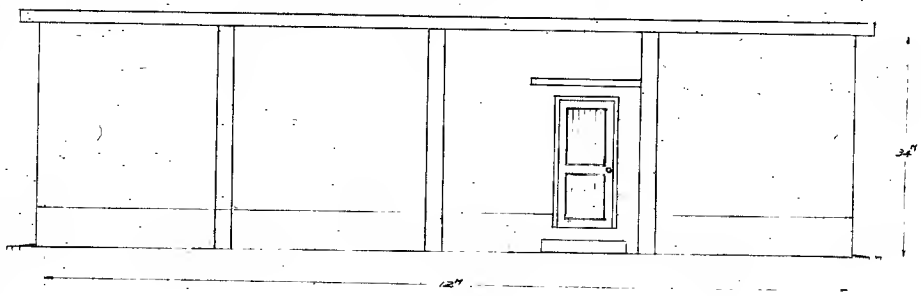
	10 A.M.	3 P.M.
June 24	88	86
25	86	84
26	85	85
27	88	87
28	84	85
29	85	86
30	83	84
July 1	86	86
Average	85.6°F	85.4°F

25X1A

[redacted]

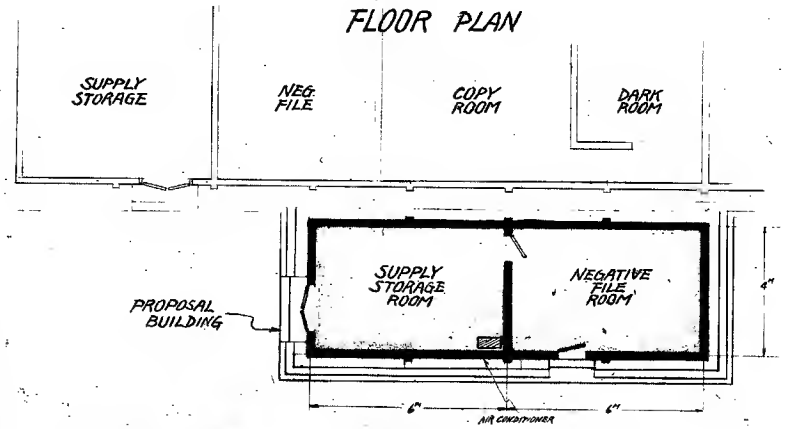
PROPOSAL PLAN OF SUPPLY STORAGE & NEGATIVE FILE ROOM

FRONT VIEW

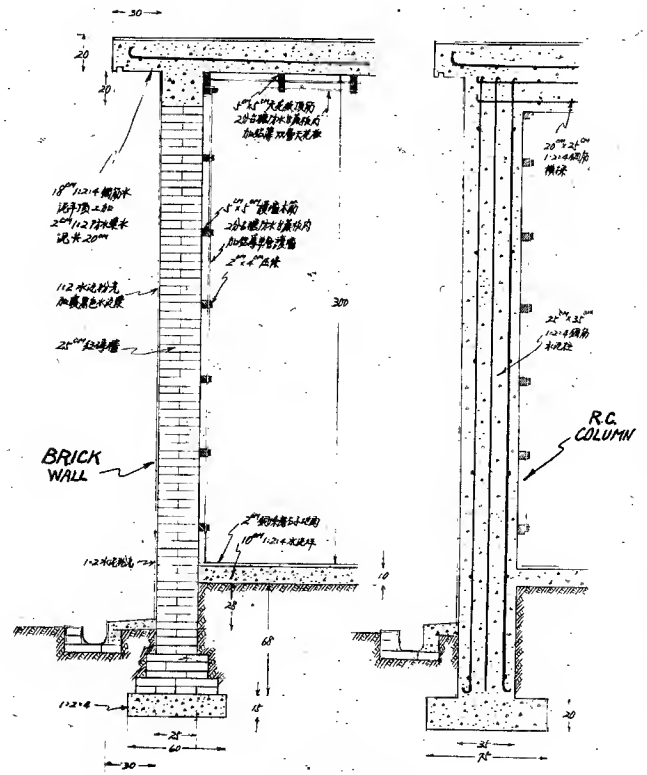


1:50

FLOOR PLAN



1:100



CONSTRUCTION SIDE VIEW

1:20

Approved For Release 2000/09/07 : CIA-RDP67B00511R000100030008-0

25X1A

TRANSMITTAL SLIP | DATE

TO: Maj. [redacted]

ROOM NO.

REMARKS: Report on "H". Material says two 5 ton airconditioners were due to arrive at "H" on 10 Aug. [redacted]

25X1A

25X1A looking into mods on the EH6-A (same as for [redacted]) Also they can obtain another chilling unit for the water if test on the first one at

25X1A [redacted] are O.K.

25X1A

FROM: Maj. [redacted]

ROOM NO. | BUILDING | EXTENSION

FORM NO 1 FEB 55 241 REPLACES FORM 36-8 WHICH MAY BE USED.

☆GPO : 1957 - O - 439445

	UNCLASSIFIED		CONFIDENTIAL		SECRET

CENTRAL INTELLIGENCE AGENCY

25X1A

OFFICIAL ROUTING SLIP

TO	NAME AND ADDRESS	INITIALS	DATE
1	Major [redacted]		
2	DB		
3			
4			
5			
6			

	ACTION		DIRECT REPLY		PREPARE REPLY
	APPROVAL		DISPATCH		RECOMMENDATION
	COMMENT		FILE		RETURN
	CONCURRENCE		INFORMATION		SIGNATURE

Remarks:

Thanks Charlie - Are they (Det H) obtaining the flat rollers for machine? Everything else apparently is planned for - in near future!

FOLD HERE TO RETURN TO SENDER

FROM: [redacted]	DATE
25X1A	

UNCLASSIF[redacted]L	SECRET